

4.9 TRANSPORTATION AND CIRCULATION

This section describes the road transportation system as well as marine traffic in the vicinity of the proposed Project and the impacts of the proposed Project and Alternatives. The analysis in this section is based on area planning documents, other project EIRs, a review of local and regional maps, and discussions with appropriate agencies.

4.9.1 Environmental Setting

Methods of Describing Traffic

Transportation conditions are often described in terms of levels of service (LOS). The LOS is a means of describing an existing amount of traffic on a roadway versus the design capacity of the roadway. The design capacity of a roadway is defined as the maximum rate of vehicle travel, (e.g., vehicles per hour) that can reasonably be expected along a section of roadway. Capacity is dependent on a number of variables, including road classification and number of lanes, road condition, terrain, weather, and driver characteristics. LOS is generally a function of the ratio of traffic volume (V) to the capacity (C) of the roadway or intersection. The LOS rating uses qualitative measures that characterize operational conditions within a traffic stream and their perception by motorists. These measures include freedom of movement, speed and travel time, traffic interruptions, types of vehicles, comfort, and convenience.

Trucks and other large or heavy vehicles, e.g., wider-than-normal vehicles, slower moving tractors, impact LOS by occupying more roadway space and by having reduced operating qualities than passenger cars. Because heavy vehicles accelerate more slowly than passenger cars, gaps form in traffic flows that affect the efficiency of the roadway. In addition, intersections present a number of variables that can influence LOS, including curb parking, transit buses, turn lanes, signal spacing, pedestrians, and signal timing.

The Highway Capacity Manual (HCM) (Transportation Research Board [TRB] 2000) is widely used in traffic studies for predicting LOS for a range of roadways and intersections. The HCM establishes LOS classifications depending on roadway volume to capacity (V/C), ratios for different types of roadways, and for intersections; these are given in Table 4.9-1. The LOS of a roadway or intersection is described using a scale ranging from A to F, with an A indicating excellent traffic flow quality and an F indicating

1 stop-and-go traffic. Level E is normally associated with the maximum design capacity
 2 that a roadway or intersection can accommodate. LOS A, B, and C are generally
 3 considered satisfactory. LOS D is considered tolerable in urban areas during peak
 4 hours due to the high cost of improving roadways or intersections to LOS C. On State
 5 highway facilities, the California Department of Transportation endeavors to maintain a
 6 target LOS at the transition between LOS C and LOS D.

Table 4.9-1
LOS vs. Volume to Capacity Ratios for Different Types of Roadways

LOS	Traffic Conditions	V/C			
		Multi-Lane Freeway ¹	2-Lane Highway ²	Arterial	Intersection ³
A	Free-flow conditions with unimpeded maneuverability. Stopped delay at signalized intersections is minimal.	0.30	0.15 to 0.26	0.00 to 0.60	<0.60
B	In the range of stable flow, but the presence of other users in the traffic streams begins to be noticeable.	0.50	0.27 to 0.42	0.61 to 0.70	0.61 to 0.70
C	In the range of stable flow, but marks the beginning of the flow in which the operation of individual users becomes significantly affected by interactions with others in the traffic stream. Long queues are experienced at intersections.	0.71	0.43 to 0.63	0.71 to 0.80	0.71 to 0.80
D	High-density but stable flow. Speed and freedom to maneuver are severely restricted, and the driver experiences a poor level of comfort.	0.89	0.64 to 0.99	0.81 to 0.90	0.81 to 0.90
E	Near capacity. Operations with significant delays and low average speeds. Severe congestion.	1.00	1.00 and over	0.91-1.00	0.91-1.00
F	Forced or breakdown flow. Operations with extremely low speeds, high delay, extensive queuing.	--	--	>1.00	> 1.00

Notes:

¹ V/C for 65 mph vehicle speed.

² V/C for level terrain, when passing is allowed.

³ From Goleta General Plan 2006 Table 7-3.

Sources: TRB 1994; CalTrans 2002; Goleta 2006

7 For divided highways, the LOS classifications are based on the vehicle density, which is
 8 a measure that quantifies the proximity of vehicles to each other within the traffic
 9 stream, and indicates the degree of maneuverability within the traffic stream (TRB
 10 1994).

As discussed above, LOS is determined not only by traffic volumes, but also by a number of roadway conditions and intersection details. Determining a roadway's potential to present a traffic flow problem is a complicated process; therefore, a screening approach is often utilized. The screening approach involves comparing the roadway class with a traffic volume level for each LOS. The screening levels are developed by making generic assumptions for the data input in the Highway Capacity Manual calculations. The screening approach is used for roadways. For intersections, the "Intersection Capacity Utilization" approach is used. Each of these is discussed below.

Roadways

Table 4.9-2 shows the screening traffic volume levels for determination of LOS for roadways in the Project area and were adopted by Santa Barbara county for screening traffic impacts. The California Department of Transportation (CalTrans) develops its own screening criteria for determining LOS on the roadways under CalTrans jurisdiction. The roadway capacities listed in the Table are "rule of thumb" figures. Some factors that affect these capacities are intersections (in the case of surface roadways), degrees of access control, roadway grades, design geometries (horizontal and vertical alignment standards), sight distance, levels of truck and bus traffic, and levels of pedestrian and bicycle traffic.

Table 4.9-2
LOS Screening Classifications and Roadway Daily Volumes

Roadway Class	Number of Lanes	LOS Classes *				
		A	B	C	D	E
Santa Barbara County						
Freeway	6	44,000	74,400	88,800	99,900	111,000
Freeway	4	29,600	49,600	59,200	66,600	74,000
Arterial	4+	-	-	47,000*	-	-
Arterial	4	23,900	27,900	34,000*	35,900	39,900
Arterial	2	12,000	14,000	14,300*	18,000	20,000
Major	4	19,200	22,300	25,500	28,700	31,900
Major	2	9,600	11,200	12,500*	14,400	16,000
Collector	2	7,100	8,200	9,280*	10,600	11,800
Local	2	-	-	7,280*	-	-
CalTrans						
Freeway	per lane per hour	710	1,170	1,680	2,090	2,350

Note: * Defined in Goleta 2006

Sources: Santa Barbara County 1996; TRB 1994

1 The Goleta General Plan (Goleta 2006a) describes a roadways acceptable capacity,
2 which is defined as the capacity of the roadway at LOS of C. If the traffic of a roadway
3 exceeds these criteria, it is defined as unacceptable.

4 *Intersections*

5 In order to assess the LOS of an intersection, a screening type approach called the
6 “Intersection Capacity Utilization” method is used (Goleta 2006). Intersections that
7 exceed LOS of C are defined as unacceptable by the Goleta General Plan. The
8 Intersection Capacity Utilization (ICU) method is a tool for measuring an intersection’s
9 capacity. The method sums the amount of time required to serve all movements at
10 saturation for a given cycle length and divides that by a reference cycle length. The
11 method is similar to taking a sum of critical volume to capacity flow ratios. The ICU tells
12 how much reserve capacity is available, or how much the intersection is at overcapacity.
13 The ICU does not predict delay, but it can be used to predict how often an intersection
14 will experience congestion. A spreadsheet is used to calculate the ICU rating.

15 **Marine Traffic**

16 Marine traffic is typically described in numbers of port calls per vessel category, e.g.,
17 tankers, container vessels, as well as the number of vessels that traverse a given
18 waterway. Vessels associated with the current facilities traverse an area between the
19 EMT and the Santa Barbara Channel shipping lanes, and then onward to the port
20 delivery terminal (Port of Los Angeles/Long Beach or San Francisco Bay destination).
21 Supply vessels and crew boat utilize the area between the Ellwood Pier and Platform
22 Holly.

23 Offshore waters in high traffic areas can be designated as safety fairways to prohibit the
24 placement of surface structures such as oil platforms. The Army Corps of Engineers is
25 prohibited from issuing permits for surface structures within safety fairways, which are
26 frequently located between a port and the entry into a Traffic Separation Scheme (TSS).

27 A TSS is an internationally recognized vessel routing designation, which separates
28 opposing flows of vessel traffic into lanes, including a zone between lanes where traffic
29 is to be avoided. TSSs have been designated to help direct offshore vessel traffic along
30 portions of the California coastline, such as the Santa Barbara Channel. Vessels are
31 not required to use any designated TSS, but failure to use one, if available, would be a
32 major factor for determining liability in the event of a collision. The TSS in the Santa
33 Barbara Channel extends from the waters north of Los Angeles to Point Conception.

Existing Conditions

Road vehicles that travel the Project area near the EMT and the EOF use the EMT Access Road, Storke Road, Hollister Avenue, Highway 101, and the access road that leads to the EOF (see Figure 4.9-1).

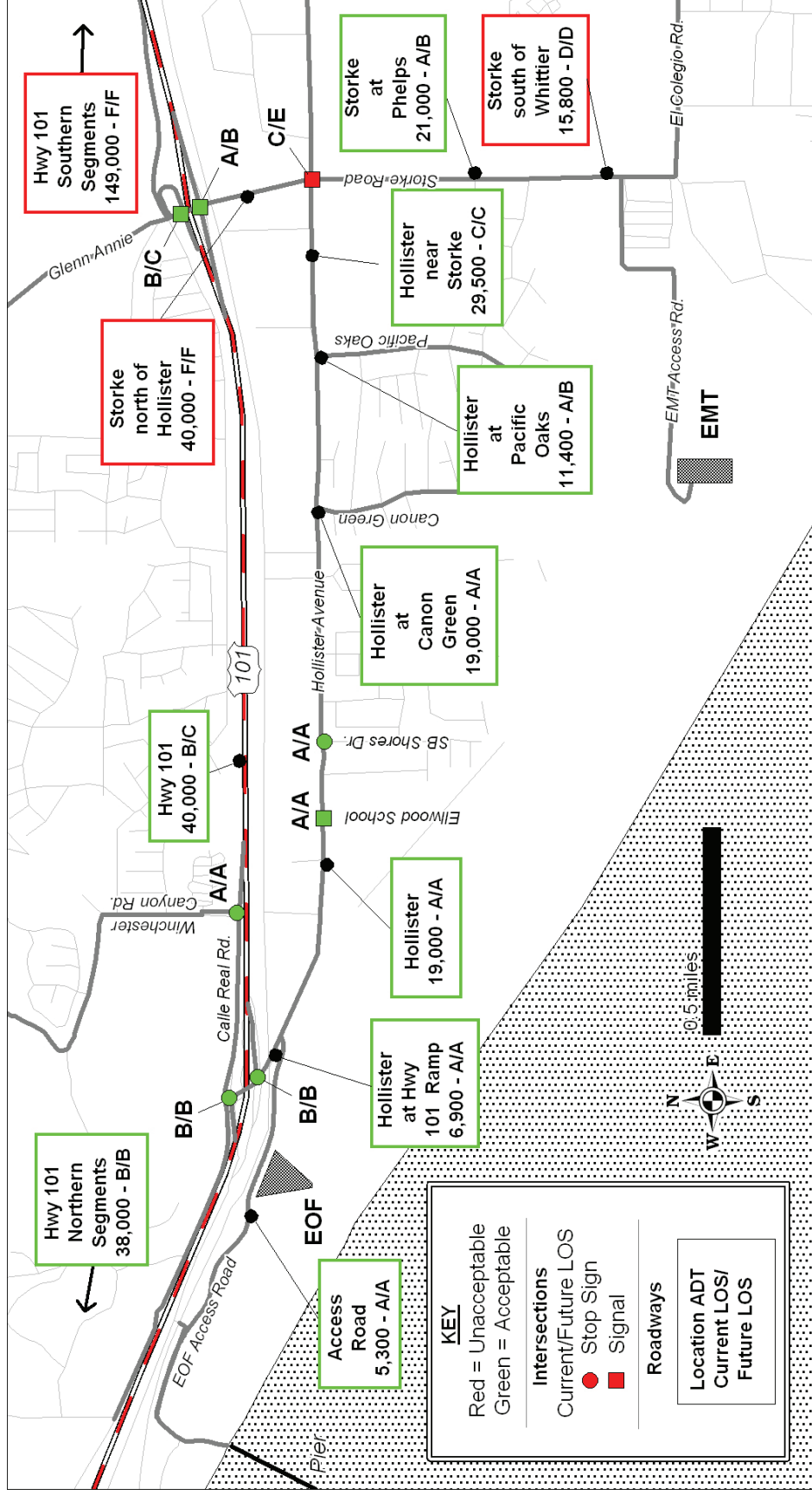
Several transportation studies were conducted recently for the area roadways. Results of these studies were used in environmental impact reports for development in Goleta and open space projects in the area, including the Comstock Homes EIR (2004), the Ocean Meadows EIR (2004), the Costco Gas Station DEIR (2007), and the Los Carneros Village DEIR (2007). In addition, the Goleta General Plan describes area roadways and their LOS ratings (Goleta 2006). Data from these documents are presented below.

U.S. Highway 101. U.S. Highway 101 extends along the Pacific Coast between Los Angeles and San Francisco. Within Santa Barbara county, this four- to six-lane highway provides the principal route between the city of Goleta and the cities of Santa Barbara, Carpinteria, and Ventura to the south, and Buellton and Santa Maria to the north. Access to Highway 101 from the Project site is provided via the Storke Road interchange from the EMT, and via the west Hollister interchange from the EOF.

EOF Access Road. This road connects the EOF to Hollister Avenue and its interchange with Highway 101. This access road is a two-lane road that serves primarily as the access road to the EOF, Bacara Resort and Spa, and Sandpiper Golf Course. Official traffic counts are not available for this road. However, the Bacara EIR estimated that traffic levels would approach 5,300 per day for an estimated LOS of A (for a collector road).

Hollister Avenue. Hollister Avenue is an arterial roadway that serves as the major east/west surface street route in the Goleta area. The acceptable capacity of the roadway is defined as 34,000-vehicles-per-day along the four-lane sections and 14,300 along the two-lane sections (west of Pebble Beach Drive). Hollister Avenue extends easterly from its terminus at the Highway 101 interchange, adjacent to Winchester Canyon Road through the city of Goleta. East of the Goleta area, Hollister Avenue connects to State Street, which extends into the city of Santa Barbara. Within the study area, Hollister Avenue is signalized at Storke Road, Pacific Oaks Road, Marketplace Drive, and Los Carneros Road intersections (City of Goleta 2004).

Figure 4.9-1: Project Area Roadways



Sources: See table 4.9-3

Storke Road. Storke Road is a north/south arterial roadway that is four lanes wide between Highway 101 and Phelps Road (acceptable capacity of 34,000 vehicles per day). South of Whittier Road, Storke Road narrows to two lanes (acceptable capacity of 14,300 vehicles per day). Storke Road provides freeway access to the western portion of the Goleta Valley, via an interchange at Highway 101. North of the interchange, Storke Road becomes Glen Annie Road, a two-lane road. Storke Road is signalized at the Highway 101 northbound and southbound ramps and the intersections at Hollister Avenue, Marketplace Drive, Phelps Road, and El Colegio Road.

Phelps Road. Phelps Road extends east of Cannon Green Drive as an east/west two-lane road to Storke Road. Phelps Road also extends easterly from Storke Road. The roadway is signalized at Storke Road and is controlled by a stop sign at Pacific Oaks Road.

EMT Access Road. The road is the only paved road connecting the EMT to the rest of the transportation system. It is a one-lane road used mainly by vehicles that service the EMT, and by recreational pedestrians, joggers, dog walkers, and bicyclists. The road is maintained by the Applicant. Motorized vehicles are rare on this road; although traffic counts are not available, it is estimated that peak day activities at the EMT could generate 40 to 50 round trips on this road.

Marine Traffic. Approximately 18 large ocean-going vessels pass the Santa Barbara Channel per day (SBCAPCD 2003). Substantial volumes of petroleum products are transported off the California coast from Alaska, foreign countries, and between California production sources. Numerous small private vessels also travel in the Santa Barbara Channel.

The Barge *Jovalan* visits the EMT an average of about once every two weeks.

Existing Roadway Performance and Future Conditions

Table 4.9-3 lists the existing and future road conditions for the local roadways. The future conditions were estimated by the city of Goleta (2004) and UCSB (2004). The future estimate considers all the proposed projects identified for the vicinity and addressed in the referenced EIR as cumulative projects (Goleta 2004, Goleta 2006).

Current traffic levels are acceptable for most roadways, except Storke Road south of the Highway 101 overpass and Storke Road south of Whittier Avenue. Future traffic levels increase only minimally and are acceptable for all but these same two roadways.

Table 4.9-3
Average Daily Roadway Traffic and LOS, Existing and Future

Roadway	Acceptable Capacity	Existing		Future *	
		ADT	LOS	ADT	LOS
Hollister Ave. at Storke Rd.	34,000	29,500	C	31,900	C
Hollister Ave. at Pacific Oaks	34,000	11,400	A	13,000	A
Hollister Ave. at Canyon Green Dr.	34,000	19,000	A	21,000	A
Hollister Ave. at U.S. 101 overpass	14,300	6,900	A	7,700	A
Storke Rd. south of U.S. 101 overpass	34,000	40,000	F	41,900	F
Storke Rd. at Phelps Rd.	34,000	21,000	A	24,100	B
Storke Rd. south of Whittier	14,300	15,800	D	16,200	D
EOF/Bacara Access Road	7,280	5,300	A	5,300	A

Notes: * Includes potential development projects. LOS = level of service; ADT = average daily traffic.

Sources: Comstock EIR 2004, City of Goleta 2004; UCSB 2004, Goleta General Plan 2006.

1 Existing Intersection Performance and Future Conditions

- 2 Table 4.9-4 summarizes the traffic conditions at the Project-affected intersections during
3 peak hour. Intersection levels of service are acceptable for current conditions. Future
4 conditions would generate unacceptable delays at the Storke Road - Hollister Avenue
5 intersection.

Table 4.9-4
Peak Hour Intersection Delay and LOS, Existing and Future

Roadway	Control	Existing		Future *	
		V/C Ratio or Delay	LOS	V/C Ratio or Delay	LOS
Calle Real at U.S. 101 NB Off-Ramp ^a	Stop-sign	8.9 sec.	A	8.9	A
Hollister Ave./Calle Real/U.S. 101 NB On-Ramp ^a	Stop-Sign	13.6 sec.	B	14.3 sec.	B
Hollister Ave./U.S. 101 Ramps ^a	Stop-Sign	11.6 sec.	B	14.6	B
Hollister Ave./Ellwood School ^a	Signal	0.36	A	0.40	A
Hollister Ave./S.B. Shores Drive ^a	Stop-Sign	8.5 sec.	A	8.7 sec.	A
Storke Rd/Hollister Ave. ^a	Signal	0.77	C	0.94	E
Glenn Annie Rd./U.S. 101 NB Ramps ^a	Signal	0.65	B	0.77	C
Storke Rd./U.S. 101 SB Ramps	Signal	0.73 ^b	C	0.86 ^c	D

Notes:

* Includes the proposed projects in Goleta. LOS = level of service; ADT = average daily traffic.

C is calculated from ratio of existing to future for NB ramps and the Costco Gas Station EIR

Sources: ^a City of Goleta 2004, 2006; ^b Costco Gas Station EIR 2007

Existing Highway 101 LOS and Future Conditions

The Highway 101 traffic conditions to the north and south of the Project area are listed in Table 4.9-5. Current traffic levels are based on CalTrans traffic volume data (CalTrans 2007). Future traffic on Highway 101 in the area was estimated based on the assumption that the traffic growth is proportional to the population growth in Santa Barbara county (Santa Barbara County 2000). According to the U.S. Census 2000, population in Santa Barbara county was growing at the rate of one percent per year.

Highway LOS values are defined for average daily traffic levels and peak hour traffic levels. Current LOS levels on Highway 101 to the north of the Project area range between an acceptable A and B for both the daily average and peak traffic levels. Current LOS levels on Highway 101 to the south of the Project area for the daily average range between an acceptable A and B.

However, Highway 101 to the south of the Project peak hour LOS ranges from a B to an F, with roadway segments to the south of Fairview Avenue all having unacceptable levels of service (LOS of D or less) during the peak hour.

Future traffic levels, calculated for the year 2010, are acceptable for the daily average, both north and south, and for the peak hour to the north. However, future LOS values are considered to be unacceptable for peak travel periods to the south of the Project area.

Bicycle Facilities

Several on- and off-street bicycle facilities are located in the Project area. These include Class I (off-street bike path) bike facilities along El Colegio Road east of Storke Road. Class II (on-street bike lane) bike facilities are present on Storke Road, on Phelps Road, and along Hollister Avenue.

Proposed Roadway Projects

According to the City of Goleta General Plan (Goleta 2006), there are a number of major future roadway improvements to the street and intersection system that will be needed to accommodate the forecasted future traffic volumes. These include:

- Connection of Phelps Road with Los Carneros to help reduce congestion on Hollister and Storke Avenues (General Plan, no specific timing);

- 1 • Storke Road capacity improvements to help reduce congestion on Storke Road
2 south of the Highway 101 overpass and Storke Road south of Whittier (General
3 Plan, no specific timing);
- 4 • Intersection improvements at Storke Road and Hollister, including changes in
5 signal timing, addition of lanes and other improvements (General Plan, no
6 specific timing);
- 7 • Potential new freeway crossing at Ellwood Station Road to connect Hollister
8 Avenue with Calle Real. This project would help to reduce congestion at the
9 Storke/Hollister Intersection (General Plan, no specific timing);
- 10 • A joint project with CalTrans to redesign and relocate the Hollister Avenue to
11 Calle Real Highway 101 bridge to a location at the intersection with Cathedral
12 Oaks Road. (MOU with CalTrans, planning phase near term due to seismic
13 retrofit requirements).

14 The implementation of these improvements would reduce all of the future LOS of the
15 roadways and intersections listed in Tables 4.9-3 and 4.9-4 to an acceptable level
16 (Goleta 2006), except for the Storke and Hollister intersection, which would improve
17 from a future LOS of E to an LOS of D.

18 The Santa Barbara County Public Works Department publishes a listing of Capital
19 improvement projects for county roadways. The only project listed near the Project area
20 is a project to improve El Colegio Road between Los Carneros and UCSB, by adding
21 round-a-bouts and landscaping. This project is in the design and permit stage as of
22 May 2008.

23 According to CalTrans (CalTrans 2004), there is only one additional road project
24 involving Highway 101 in the vicinity of the Project (aside from the Hollister/Highway
25 101 overpass), which is the widening of the Highway from Carpinteria to the Santa
26 Barbara Milpas Road interchange. This project planning is ongoing as of May 2008.

**Table 4.9-5
Existing and Future Traffic Conditions on Highway 101 in the Project Area**

Road/Route	Existing Traffic (2005)					Future Traffic (2010)				
	ADT	Peak Hr per Lane	Peak Hour LOS	Non-peak Hour per Lane	Non-peak Hour LOS	ADT	Peak Hr per Lane	Peak Hour LOS	Non-peak Hour per Lane	Non-peak Hour LOS
Casitas Pass Rd.	77,000	2,125	E	735	B	82,297	2,274	E	796	B
Carpinteria, Linden Ave.	78,000	2,300	E	745	B	83,380	2,301	E	806	B
Santa Monica Rd./7thSt.	79,000	2,250	E	748	B	84,463	2,491	F	810	B
South Padaro Ln.	81,000	2,250	E	761	B	85,546	2,436	F	824	B
Padaro Ln.	88,000	2,375	F	783	B	87,711	2,436	F	847	B
Evans Ave.	86,000	2,350	F	853	B	95,291	2,572	F	924	B
Montecito, Sheffield Dr.	87,000	2,250	E	833	B	93,126	2,545	F	902	B
San Ysidro Rd.	94,000	2,450	F	848	B	94,209	2,436	F	918	B
Olive Mill Rd.	90,000	2,250	E	915	B	101,789	2,653	F	991	B
Cabrillo Rd.	105,000	2,650	F	880	B	97,457	2,436	F	953	B
Jct.Rte.144; Milpas St.	101,000	2,525	F	1,026	B	113,700	2,870	F	1,111	B
Garden St.	101,000	1,683	D	988	B	109,369	2,734	F	1,070	B
Castillo St.	113,000	1,883	D	659	A	109,369	1,823	D	713	B
Carrillo St.	135,000	2,300	E	737	B	122,363	2,039	D	798	B
Mission St.	149,000	2,133	E	878	B	146,186	2,491	F	951	B
Jct. Rte. 225 S-E, Las Positas Rd.	136,000	2,000	D	987	B	161,346	2,310	E	1,069	B
La Cumbre Rd.	136,000	2,067	D	899	B	147,269	2,166	E	973	B
Jct. Rte. 154; State St.	120,000	1,950	D	896	B	147,269	2,238	E	970	B
El Sueno Rd.	119,000	1,933	D	785	B	129,943	2,112	E	850	B
Turnpike Rd.	119,000	1,933	D	778	B	128,860	2,094	E	843	B
Jct. Rte. 217 South (to UCSB)	81,000	1,975	D	778	B	128,860	2,094	E	843	B
Fairview Ave.	71,000	1,725	D	795	B	87,711	2,139	E	860	B
Los Carneros Rd.	62,000	1,350	C	697	A	76,883	1,868	D	754	B

**Table 4.9-5
Existing and Future Traffic Conditions on Highway 101 in the Project Area**

Road/Route	Existing Traffic (2005)					Future Traffic (2010)				
	ADT	Peak Hr per Lane	Peak Hour LOS	Non-peak Hour per Lane	Non-peak Hour LOS	ADT	Peak Hr per Lane	Peak Hour LOS	Non-peak Hour per Lane	Non-peak Hour LOS
Glen Annie/Stroke Rd.	40,000	1,038	B	615	A	67,137	1,462	C	666	A
Hollister Ave.	38,000	1,013	B	390	A	43,314	1,123	B	422	A
El Capitan Beach State Park	36,000	875	B	369	A	41,149	1,096	B	400	A
Las Cruces, Jct. Rte.1 Northwest	24,500	638	A	353	A	38,983	947	B	383	A
Santa Rosa Rd.	22,400	588	A	239	A	26,530	690	A	258	A
Buellton, Jct. Rte. 246	20,200	538	A	218	A	24,256	636	A	236	A
North Buellton	23,000	525	A	196	A	21,874	582	A	212	A
Zaca, Jct. Rte. 154 East	29,000	788	B	227	A	24,906	568	A	246	A
Los Alamos, Jct. Rte. 135 N-W	27,500	738	B	281	A	31,403	853	B	304	A
Clark Ave.	38,000	800	B	267	A	29,779	799	B	289	A
South Santa Maria	44,000	988	B	378	A	41,149	866	B	410	A
Betteravia Rd.	55,000	1,163	B	435	A	47,646	1,069	B	471	A
East Stowell Rd.	61,000	1,475	C	547	A	59,557	1,259	C	593	A
Jct. Rte. 166 W, Main St.	59,000	1,650	C	599	A	66,054	1,597	C	649	A
Donovan Rd.	58,000	1,700	D	570	A	63,889	1,787	D	617	A
Jct. Rte. 135 S	64,000	1,650	C	557	A	62,806	1,841	D	603	A
San Luis Obispo County	64,000	1,650	C	624	A	69,303	1,787	D	676	A

Note: Future traffic is for five years from current data, or 2010.

Source: CalTrans 2005

4.9.2 Regulatory Setting

International and Federal regulations and jurisdictions in regards to vessel safety are described in Section 4.2, Hazards and Hazardous Materials.

Federal

The Federal government passes the responsibilities of maintaining and regulating the roadways to the State and local entities.

United States Coast Guard (USCG)

USCG, through Title 33 (Navigation and Navigable Waters) and Title 46 (Shipping) of the CFR, is the Federal agency responsible for vessel inspection, marine terminal operations safety, coordination of Federal responses to marine emergencies, enforcement of marine pollution statutes, marine safety (navigation aids, etc.), and operation of the National Response Center for spill response. They are also the lead agency for offshore spill response.

On November 27, 1996, USCG underkeel clearance regulations for tanker vessels without double hulls became effective (33 CFR 157.455). These regulations require, in part, that the ship's master calculate the tanker's deepest navigational draft and the controlling depth of the intended transit, and discuss these issues with the pilot prior to any transit.

Current USCG regulations require a federally licensed pilot aboard every tanker vessel mooring and unmooring at offshore marine terminals.

State

CalTrans maintains the State highway system, including Highway 101, which provides the main vehicle access to the Project area. Maximum load limits for trucks and safety requirements for oversized vehicles are generally regulated by CalTrans for operation on highways.

Local

The City of Goleta General Plan established a number of policies for transportation demand management (Goleta 2006). These are summarized below.

- TE2.1 - Limit traffic congestion through reducing low-occupancy auto trips and shifting peak hour vehicle trips to off-peak hours;
- TE2.4 - Require proposed larger sized non-residential developments with 100 or more employees to prepare and adopt a Transportation Management Plan;
- TE3.8 - Primary truck routes shall be limited to freeways and major and minor arterials within the city; and
- TE4.1 - Traffic LOS standard C shall apply citywide to major arterials, minor arterials, and collector roadways and signalized and unsignalized intersections.

The Santa Barbara County Association of Governments (SBCAG) is designated by State and Federal governments as the Metropolitan Planning Organization (MPO), the Local Transportation Authority (LTA), and the Regional Transportation Planning Agency (RTPA). Under these designations, SBCAG has responsibility for all regional transportation planning and programming activities.

The proposed Project would be subject to the provisions of the Santa Barbara County Congestion Management Program (CMP). The CMP is a comprehensive program designed to reduce auto-related congestion and designates major highway and road segments within the Project vicinity. The CMP requires an assessment of the Project's potential impacts on designated roadways, which include Hollister Road and Highway 101. As the Congestion Management Agency (CMA) for Santa Barbara County, SBCAG is responsible for the development and implementation of the county-wide CMP. All urban counties are required to have a CMP.

The County of Santa Barbara Comprehensive Plan Circulation Element defines acceptable increases in traffic levels along roadways and at intersections.

4.9.3 Significance Criteria

Traffic impacts would be considered significant if any of the following applies to the Project or Alternatives:

- Project traffic increases an intersection peak hour V/C ratio or adds number of trips by the value provided in Table 4.9-6 (City of Goleta GP);

Table 4.9-6
Goleta and Santa Barbara County Traffic Significance Criteria for Intersections

Peak Hour LOS (including Project)	Increase in V/C	Additional Trips per hour
A	0.20	—
B	0.15	—
C	0.10	—
D	—	15
E	—	10
F	—	5

- Project access to a major road or arterial road would require a driveway that would create an unsafe situation or a new traffic signal or major revisions to an existing traffic signal (City of Goleta GP);
- Project adds traffic to a roadway that has design features (e.g. narrow width, roadside ditches, sharp curves, poor sight distance, inadequate pavement structure) or receives use, which would be incompatible with a substantial increase in traffic (e.g. rural roads with use by farm equipment, livestock, horseback riding, or residential roads with heavy pedestrian or recreational use, etc.) that will become potential safety problems with the addition of Project or cumulative traffic (City of Goleta GP);
- Project traffic would utilize a substantial portion of an intersection's capacity where the intersection is currently operating at acceptable levels of service (A through C), but with cumulative traffic would degrade to or approach LOS D (V/C 0.81) or lower. Substantial is defined as a minimum change of 0.03 V/C for intersections which would operate from 0.80 to 0.85 V/C, and a change of 0.02 V/C for intersections which would operate from 0.86 to 0.90 V/C, and 0.01 V/C for intersections which would operate greater than 0.90 V/C (LOS E or worse) (City of Goleta GP);
- Project traffic contributes over 100 peak-hour trips to a roadway with LOS D, or 50 peak-hour trips to a roadway with LOS E or F to roadways under the Santa Barbara Association of Governments Congestion Management Plan jurisdiction (Storke, Hollister or highway 101). (from SBAG CMP 2003); and
- Project activities would reduce the existing level of safety for navigating vessels.

4.9.4 Impact Analysis and Mitigation

Traffic would be associated with the proposed Project for both trucks carrying equipment and materials and for commuters/personnel vehicles/automobiles during both the construction period and the operations period, including drilling. Each of these scenarios is discussed below.

Construction Traffic

Some area roadways and intersections currently have unacceptable levels of service (Storke Road segment south of the Highway 101 overpass, Storke Road south of Whittier and Highway 101 to the south during peak hour) or could have unacceptable levels of service in the future (Storke and Hollister intersection). If Project related traffic was to utilize these roadways and intersections, they would contribute to reducing the level of service. This would be considered a significant impact. See the discussion below.

Operations Traffic

Truck traffic associated with the current operations of the EOF consists of an estimated 700 to 800 truck round trips annually, which would double under the proposed Project scenario. Peak day truck round trips would increase from about two per day to about four per day. Truck trips currently associated with Platform Holly and the Ellwood Pier are estimated to be less than 50 round trips per year, which would increase during the drilling program to an estimated 310 truck round trips per year, or less than five truck round trips per day during peak periods. This would be less than a significant impact to the Hollister/Storke Road intersection, the Storke Road segment south of the Highway 101 overpass, or Highway 101 in a southerly direction.

The existing personnel traffic to/from the EOF is estimated to be about 20 personnel trips per day. This is not anticipated to increase with the proposed Project.

Personnel trips to/from Platform Holly currently generate an estimated average of ten round trips per day. This would increase during drilling to an estimated 20 round trips per day. This would not be a significant impact to area roadways.

EMT traffic currently averages about one round trip per day by the maintenance crew. In case of an accident or unforeseen maintenance, e.g., to remove tank contents or

1 sump liquids from the EMT, there have been up to 40 to 50 vehicle round trips per day
2 to/from the EMT. This operational traffic would cease under the proposed Project.

3 After the pipeline is constructed, operational traffic would include pipeline surveys that
4 would be done weekly by maintenance crews. One trip per day on a weekly basis
5 would have minimal impact on the transportation network along the new pipeline ROW.
6 Thus, there would be no operational transportation impacts from the proposed pipeline
7 installation.

8 The existing daily marine vessel traffic would not substantially change with the proposed
9 Project, except that an increase in supply vessels would be needed to deliver drilling
10 materials to Platform Holly during the drilling operations. This would not be considered
11 a significant impact on marine vessel safety in the area.

12 **Impact T-1: Increased Traffic during Construction could Exacerbate Existing**
13 **Unacceptable or Future Unacceptable Traffic Levels of Service.**

14 **The use of certain intersections or roadways to deliver/remove materials to/from**
15 **the EOF, pipeline route, EMT, or Platform Holly could cause significant impacts to**
16 **area roadways that are currently, or could in the future, have unacceptable levels**
17 **of service (Potentially Significant, Class II).**

18 *Impact Discussion*

19 Traffic associated with the EOF during construction of the proposed Project
20 modifications at the EOF would total 45 truck round trips or an estimated peak of five
21 truck round trips per day, and an estimated 136 round trips per day for personnel during
22 the peak construction period. If these trips were to occur during peak hours and were to
23 travel through the Hollister/Storke intersection for the future case, the Storke Road
24 south of the Highway 101 overpass roadway segment, or through southerly segments of
25 Highway 101 during peak hours for the existing case, it would be considered a
26 significant impact (exceeding 50 peak hour trips on a roadway segment with LOS of F).

27 Truck trips associated with the EMT decommissioning would total an estimated
28 487 truck round trips, including close to 300 truck round trips for soil infill, with a peak
29 day of up to an estimated 65 truck round trips for a short period. Personnel trips are
30 estimated to average 43 round trips per day. This would be a significant impact to the
31 Storke/Hollister intersection for the future case, to the Storke Road south of the
32 Highway 101 overpass road segment, the Storke Road south of Whittier, or through

southerly segments of Highway 101 during peak hours for the existing case (exceeding 50 peak hour trips on a roadway segment with LOS of F or 10 trips during the peak hour through an intersection rated at E (future case for Hollister-Storke intersection)).

Pipeline construction would generate a total of about 492 truck round trips, with a peak day number equal to an estimated 48 truck round trips for the period during pipeline installation. Personnel trips would add an additional 113 round trips per day. This would be below the significance criteria for Hollister Avenue or Calle Real, but would be a significant impact to the Storke/Hollister intersection for the future case, or to the Storke Road south of the Highway 101 overpass roadway segment, or through southerly segments of Highway 101 during peak hours for the existing case (exceeding 50 peak hour trips on a roadway segment with LOS of F).

Short-term transportation impacts could occur on roadways adjacent to the pipeline right-of-way (ROW), roadways that would be used for deliveries of the pipeline construction materials/equipment, roadways that would be used to haul demolition materials to and from the EMT, and those roadways that are used to transport materials and commuters to/from the EOF and Platform Holly/Ellwood Pier. Potentially significant impacts would include:

- Closures of lanes or entire roads, e.g., Calle Real or Storke Road (associated with pipeline construction), that would result in restrictions to traffic, emergency vehicles, bicycles, or pedestrian movements through the roads, bike trails or pedestrian walks adjacent or part of the pipeline ROW;
- Trucks exiting the EMT access road would have to make a left-hand turn onto Storke Road, which could produce a safety hazard; and
- Damage to the road surfaces due to movements of heavy machinery and trucks, and/or due to the pipeline construction if the ROW includes a road or a side of the road.

Mitigation Measures

T-1a. Truck and Commuter Vehicle Routing. For the EOF, pipeline and Platform Holly construction, the Applicant shall limit truck deliveries and commuters/personnel to the west Hollister-Highway 101 on and off ramps and shall not utilize the Storke Road and Hollister Avenue intersection or the Storke Road Highway 101 on/off ramps during peak hours.

T-1b. Truck and Commuter Highway non-peak Operations. Truck trips associated with the EMT decommissioning shall be limited to non-peak hours.

T-1c. Construction Traffic Control Plan The Applicant shall prepare, provide funding for, and implement a Construction Traffic Control Plan, which shall be approved by the county and city of Goleta (depending on the segment of the pipeline and the location of work), and shall include, but not be limited to the following:

- (1) Provide traffic controls when lanes are closed due to pipeline construction, e.g., flaggers, detour signs, orange safety cones;
- (2) Provide traffic controls at the EMT access road and Storke Road to allow for left hand turning in a safe manner, e.g., flaggers;
- (3) Close the pipeline trench for the non-work hours with approved plating, and surround the trench with safety barriers if necessary;
- (4) Provide detours for emergency vehicles;
- (5) Provide alternative routes for bicycles and pedestrians where feasible;
- (6) Notify the residents or owners of any properties within 1,000 feet and/or adjacent to the pipeline ROW of the construction schedule at least one week prior to construction in their vicinity;
- (7) Provide access to the affected properties during the construction; if access to businesses is not possible during the work hours, provide lost-sales compensation; and
- (8) Monitor for road damage from construction-related activities and compare the affected roads at the end of the construction to the pre-construction conditions; repair any visible construction-caused damage to restore the road to its pre-construction condition or better.

Rationale for Mitigation

All Project-related transportation impacts could be mitigated through development and implementation of a Construction Traffic Control Plan and by limiting routes and hours of operation. The Applicant would need to obtain an encroachment permit from

CalTrans to be able to cross underneath Highway 101 via drilling. In order to obtain the permit, the Applicant would be required to meet the applicable CalTrans specifications. Therefore, impacts would be reduced to less than significant with mitigation (Class II).

Table 4.9-7
Summary of Transportation and Circulation Impacts and Mitigation Measures

Impact	Impact Class	Mitigation Measures
T-1: Increased Traffic during Construction could Exacerbate Existing Unacceptable or Future Unacceptable Traffic Levels of Service.	Class II	T-1a: Truck and Commuter Vehicle Routing. T-1b: Truck and Commuter Highway Non-peak Operations. T-1c: Construction Traffic Control Plan.

Extension of Life Impact

The Applicant has stated that the proposed Project would not increase the life of the existing South Ellwood Field Facilities, which is currently defined by the operational life of Platform Holly until 2040, and would likely reduce the overall duration of oil and gas production from existing facilities due to more efficient extraction of the resource. However, it is possible that increased oil and gas production from new wells drilled into the existing and proposed leases, formations (Lower Sespe) and fault blocks (North Flank and Eagle Canyon) could produce economically viable resources for a longer-than-expected period and increase the life of the existing facilities. Therefore, the impacts identified in Table 4.9-7 have the potential to occur over a longer period than assumed for the proposed project, exacerbating potentially adverse impacts.

Increasing the project duration would result in the future extension of potential traffic impacts and would be considered potentially significant but mitigable (Class II).

4.9.5 Impacts of Alternatives

Detailed descriptions of the No Project Alternative and the alternative methods of crude oil transportation have been provided in Section 3.0, Alternatives.

1 **No Project Alternative**

2 Under the No Project Alternative, traffic levels would be the same as the current
3 operations. Under this scenario, the lease extension would not be granted, and
4 therefore additional drilling and associated marine vessel trips would not take place. In
5 addition, the EMT would continue operations.

6 Currently, lease agreements for the operations of the EMT will expire in 2013 and/or
7 2016 (see Section 2.0, Project Description). It is assumed that, under the No Project
8 Alternative, after the lease expirations, the Applicant would pursue alternative means of
9 crude oil transport such as pipeline or truck transportation. The impacts of these
10 transportation modes are described in the Venoco Ellwood EMT Lease Renewal Project
11 Draft EIR (CSLC 2007). Any future crude oil transportation options would be subject to
12 appropriate agency review and approval.

13 **No EOF Modifications**

14 There would be no new impacts with this alternative.

15 **Processing at Platform Holly Alternative**

16 Under this Alternative, all crude and gas processing would be conducted at Platform
17 Holly. EOF operations would be limited to electrical switchgear operations, gas
18 compression and crude oil storage and pumping. Removal of the EOF equipment
19 would require an estimated 100 truck round trips with up to 20 to 30 truck round trips
20 per day and 100 personnel round trips per day during the construction period.

21 Installation of additional equipment on Platform Holly would require that the equipment
22 be trucked to the Ellwood Pier, loaded on supply boats, and transported to Platform
23 Holly. An estimated 50 truck round trips, with up to 15 per day, would be required to
24 transport the equipment to the pier. Personnel would generate an estimated 85 round
25 trips per day. As the use of Storke Road/Hollister Avenue intersection, the Storke Road
26 segment south of the Highway 101, Storke Road south of Whittier Ave. or Highway 101
27 southerly during peak hours could constitute a significant impact similar to impact **T-1**,
28 mitigation measure **T-1a**, **T-1b** and **T-1c** would apply.

29 Installation of the pipeline and decommissioning of the EMT would have the same
30 impacts as **T-1** associated with the proposed Project and mitigation measures **T-1a**, **T-**
31 **1b** and **T-1c** would apply.

1 An estimated increase in supply vessel trips of approximately 100 over the 15-month
2 timeframe would be required, and an increase in crew boat vessels of a total of
3 750 over the 15-month construction project. This increase, of one to two vessels per
4 day, would not produce significant marine traffic impacts.

5 Operations at the EOF would be substantially reduced. Therefore, truck and personnel
6 trips to the EOF would be reduced accordingly. However, as additional processing
7 operations would be located on Platform Holly, there would be an increase in the
8 operational personnel requirements at Platform Holly to 20 personnel per day, and an
9 increase in the operational truck round trips to the Ellwood Pier (for Platform Holly) to an
10 estimated 150 annually. Note that the majority of truck trips currently to/from the EOF
11 are associated with gas liquids and sulfur transportation, which would no longer take
12 place under this alternative. This would produce a net reduction of about 75% in truck
13 trips to the EOF and Ellwood Pier area.

14 **Las Flores Canyon Processing: Offshore Gas and Onshore Oil Pipeline**
15 **Alternative**

16 Under this Alternative, all crude and gas processing would be conducted at the
17 ExxonMobil LFC facility. EOF operations would be removed except for a valve box
18 located where the pipeline comes ashore.

19 Traffic impacts would be similar to those described above for the proposed Project,
20 except that additional traffic would be associated with the removal of additional EOF
21 equipment and for the transportation of pipeline equipment and pipe to the Ellwood pier
22 for the installation of the offshore gas pipeline. Total truck trips to/from the EOF are
23 estimated to be about 140 truck round trips with a peak day of 20 to 30 truck round trips.
24 Personnel trips would total 100 round trips per day.

25 Truck trips associated with the transportation of pipe to the Ellwood Pier are estimated
26 to be a total of 92 trips, with a peak day of twelve truck round trips. Personnel trips
27 associated with offshore pipeline installation are estimated to have a peak day of 100
28 round trips. This number of trips would be below the significance criteria for Hollister
29 Avenue and the EOF access road, both of which currently have a LOS of A. This
30 would, therefore, not be considered a significant impact. However, if these trips were to
31 utilize the Storke Road area, impacts would be similar to impact **T-1** and mitigation
32 measure **T-1a** would apply.

Traffic associated with Platform Holly drilling operations, the onshore pipeline installation, and the EMT decommissioning would be the same as the proposed Project. Mitigation measures **T-1a**, **T-1b** and **T-1c** would apply.

Las Flores Canyon Processing: Offshore Gas and Offshore Oil Pipeline Alternative

Under this Alternative, all crude and gas processing would be conducted at the ExxonMobil LFC facility. EOF operations would be removed completely. The pipeline from Platform Holly to LFC would be constructed offshore along with the offshore gas pipeline. This would generate an additional total 25 to 30 truck round trips to transport the additional pipe and equipment to the Ellwood Pier. Other trips would be the same as the LFC alternative with the onshore pipeline. This number of trips would be below the significance criteria for Hollister Avenue and the access road, both of which currently have a LOS of A. This would, therefore, not be considered a significant impact. Mitigation measure **T-1a** would apply.

4.9.6 Cumulative Projects Impact Analysis

Other projects proposed in the Project area would contribute to transportation congestion. None of the energy related offshore projects would produce traffic impacts along the same roadways and intersections that the Project would impact. Residential/commercial projects, including the Village at Los Carneros, the Costco Gasoline Station, the Cabrillo Business Park, the Comstock Homes project, the Haskell's Landing and the cumulative effect of the list of smaller projects, through increasing traffic in the area, could produce significant cumulative impacts. The City of Goleta General plan outlines roadway and intersection improvement projects that would be needed to reduce the traffic impacts of the cumulative projects. This has been addressed by examining the potential future traffic increases and their associated impact of roadway LOS, in the above impact section.

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